

## Claims

- [c1] A method of structuring of a substrate comprising the steps of:
  - providing a polymerization starter layer on the substrate comprising a plurality of polymerization starters,
  - applying a radiation field to the polymerization starter layer for selectively reducing a density of polymerization starters of the polymerization starter layer,
  - applying monomers to the polymerization starter layer,
  - polymerizing the monomers, the polymerizing being initiated by the starters of the polymerization starter layer, and
  - structuring the substrate using the polymerized monomers as a mask.
- [c2] The method of claim 1 further comprising immobilizing the polymerization starters on a surface of the substrate.
- [c3] The method of claim 1 further comprising providing a coating on the substrate for forming of covalent bonds with the polymerization starters.

- [c4] The method of claim 3, wherein the coating contains SiO<sub>x</sub>.
- [c5] The method of claim 1, wherein the radiation field is a UV radiation field.
- [c6] The method of claim 1, wherein the density of the polymerization starters is selectively reduced by cracking of some of the polymerization starters.
- [c7] The method of claim 1, wherein the polymerization starter layer being a mono-molecular layer of polymerization starters.
- [c8] The method of claim 1, wherein the radiation field is provided by means of a radiation source and a gray or a grating mask.
- [c9] The method of claim 1, wherein the radiation field is chosen to provide a lens structure in the substrate, the lens structure having a defined focal point.
- [c10] The method claim 1 comprising performing a semiconductor manufacturing step using the polymerized monomers as a mask.
- [c11] The Method of claim 1, wherein the step of structuring the substrate being performed by an ion mill, reactive

ion etch (RIE) or wet etch process.

- [c12] The method of claim 1 wherein in the step of polymerizing the monomers, a varied topography of the substrate is formed corresponding to the density of the polymerization starters of the polymerization starter layer, and wherein in the step of structuring the substrate, the varied topography is reproduced into the substrate.
- [c13] A semiconductor device having a multiple layer topography characterized by the multiple layer topography having only a single crystal growth edge.
- [c14] A micromachined device having a multiple layer topography characterized by the multiple layer topography having only a single crystal growth edge.